Monitoring Data Record

Project Title: R-977A US 64 COE Action ID: 2005301150
Stream Name: UT to Hiwassee River (Site 11) DWQ Number: 3487
City, County and other Location Information: Murphy, Cherokee County, US 64, from US 19-74-129 in Murphy to East of NC 141 in Peachtree (Sta. 12+20 to 15+50)
Date Construction Completed: March 2007 Monitoring Year: ( 2 ) of 5
Ecoregion: 8 digit HUC unit 06020002
USGS Quad Name and Coordinates:
**Rosgen Classification:**
Length of Project: 1285' (5/2/08 permit mod. added an additional 135 ft. to Site 11)
Urban or Rural: Rural Watershed Size:
Monitoring DATA collected by: M. Green and J. Young Date: 8/12/09
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Rd , Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov
Consultant Information:
Name:
Address:
Telephone Number: Email address:
**Project Status:**

**Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.)**: Level **1** ~~2~~ ~~3~~
**The permittee shall monitor the completed stream relocation in accordance with Monitoring Level 2 of the US Army Corps of Engineers, Wilmington District, Stream Mitigation Guidelines of April 2003. The monitoring reports, including reference photographs, plant survival data and visual inspection notes identifying specific problem areas, will be submitted to the Corps of Engineers, Asheville Regulatory Field Office within 60 days of completion of the monitoring. The monitoring report will also include a discussion of any deviations to channel stability. The success of the stream relocation as project mitigation will be evaluated based on those success criteria listed in the reference Stream Mitigation Guidelines.**

Section 1. PHOTO REFERENCE SITES
*(Monitoring at all levels must complete this section)*

**Total number of reference photo locations at this site: 18 photos were taken from 9 photo point locations. 4 additional photos from were taken from 2 photo points locations that were added for the additional 135 ft. of stream relocation**
**Dates reference photos have been taken at this site: 2/11/08, 8/13/08, 3/4/09, 8/12/09**

**Individual from whom additional photos can be obtained (name, address, phone):**

Other Information relative to site photo reference: A site map with approximate photo point locations is included with this report.

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

**Section 2. PLANT SURVIVAL**
**Attach plan sheet indicating reference photos.**

Identify specific problem areas (missing, stressed, damaged or dead plantings):

Estimated causes, and proposed/required remedial action:

ADDITIONAL COMMENTS: The planted vegetation is surviving and the unapproved mowing of the buffer that was taking place has stopped. The planted vegetation consisted of black willow, silky dogwood, sycamore, green ash, white oak, pussy willow, and redtip dogwood. Other vegetation noted onsite consisted of goldenrod, *Juncus* sp., jewelweed, tear-thumb, ragweed, mimosa, pokeberry, briars, cutgrass, birch, and various grasses.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

**Section 3. CHANNEL STABILITY**

**Visual Inspection:** The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

This is the Year 2 Summer evaluation for the UT Hiwassee River stream relocation. A few of the crossvanes continue to have water piping under them and water is still piping under ground below the driveway culvert due to the blasting that took place during construction to relocate the stream. Some erosion exist at Sta. 15+00 as noted below. A permit modification was completed to relocate an additional 135 feet of stream at Site 11. Photo Point numbers 10 and 11 up and down stream, respectively show this additional 135 feet. This section of stream relocation is mainly bedrock. NCDOT will continue to monitor this stream relocation.

| Date Inspected 8/12/09 | Station 13+20 PP#7 Upstream and Downstream Photo | Station 13+00 Additional Photo | Station 13+20 to 13+80 Between PP#5 and PP#7 | Station 15+00 Additional Photo | Station Number |
|---|---|---|---|---|---|
| Structure Type | Crossvane | Crossvane | | Crossvane | |
| Is water piping through or around structure? | Water piping under crossvane due to blasting that took place to relocate stream | | Water bypassing stream bed underground where blasting took place | | |
| Head cut or down cut present? | | | | | |
| Bank or scour erosion present? | | | | Erosion on right bank at the right arm of a crossvane | |
| Other problems noted? | | Header rock has been displaced but not affecting stream stability due to bed rock in channel | | | |

# UT Hiwassee River

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

Photo Point #2 (Downstream)

Photo Point #3 (Upstream)

Photo Point #3 (Downstream)

Year 2 Summer – August 2009

# UT Hiwassee River

Photo Point #4 (Upstream)

Photo Point #4 (Downstream)

Photo Point #5 (Upstream)

Photo Point #5 (Downstream)

Photo Point #6 (Upstream)

Photo Point #6 (Downstream)

Year 2 Summer – August 2009

# UT Hiwassee River


Photo Point #7 (Upstream)


Photo Point #7 (Downstream)


Photo Point #8 (Upstream)


Photo Point #8 (Downstream)


Photo Point #9 (Upstream)


Photo Point #9 (Downstream)

Year 2 Summer – August 2009

# UT Hiwassee River

Photo Point #10 (Upstream)

Photo Point #10 (Downstream)

Photo Point #11 (Upstream)

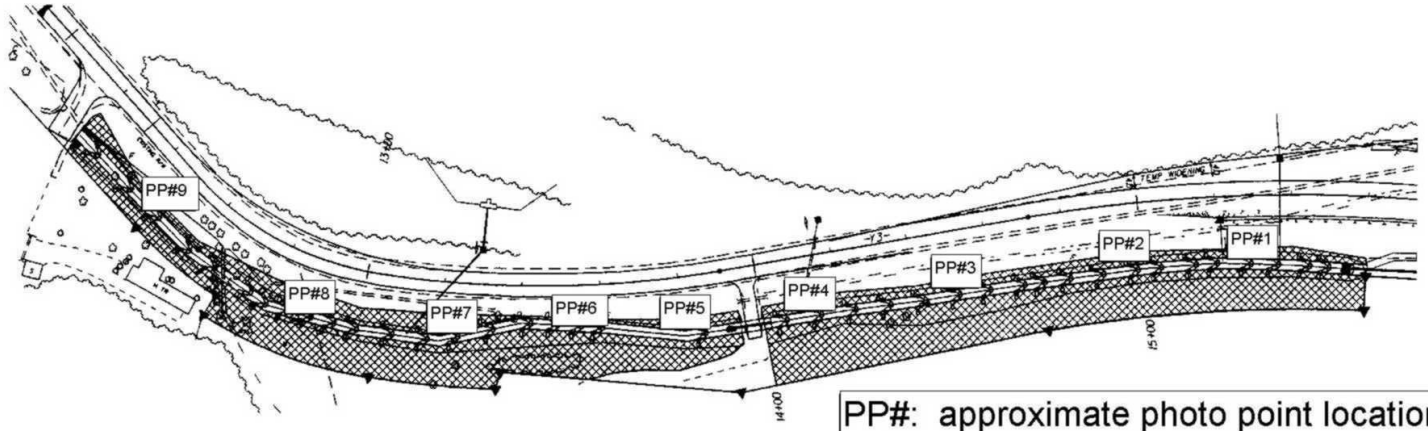
Photo Point #11 (Downstream)

Erosion @ Sta. 15+00

Crossvane w/ displaced header rock @ Sta. 13+00

Year 2 Summer – August 2009

UT Hiwassee River
R-977A
Cherokee County



# UT Hiwassee River
# PP: approximate photo point locations